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THE SILVER INSTITUTE LETTER

INFORMATION ON SILVER FOR INDUSTRY

VOLUME XV NUMBER 6 DECEMBER 1985

SILVER HELPS RAISE FUNDS FOR RONALD McDONALD HOUSE

Thousands of Washington, D.C. area residents found out what a million dollars worth of silver bullion looks like when they visited the Guardian Safe Deposit in Arlington, Virginia on November 16th and 17th to participate in a "Million Dollar Weekend".

The Million Dollar Weekend featured a raffle of silver ingots and other valuable prizes for the benefit of the Ronald McDonald House, 1326 Quincy Street, N.E., Washington, D.C. 20017, founded in 1980. It also gave visitors the rare opportunity of getting their pictures taken with a one million dollar silver bullion display weighing over 1/2 ton.

Happy winner of 1000 ounces of 999 pure silver bars was Linda Williams, center, flanked by another participant and officers of Guardian Safe Deposit, Inc. sponsors of the "Million Dollar Weekend."

But silver provided an additional incentive. Prior to the event, it was announced that on both Saturday and Sunday, each one of the first 500 visitors would receive a free 1-gram silver bar.

In addition to the happy recipients of the pure silver bars, one lucky visitor exchanged her $10 raffle ticket for ten impressive one hundred ounce 999 silver bars produced by Johnson Matthey and donated by the Guardian Trust Co. of Toronto, Canada.

All proceeds from the raffle of the silver bars and other prizes were donated to the Ronald McDonald House of Washington, D.C., a home-away-from-home for over 1,000 out-of-town families who have stayed there while their seriously ill children have undergone treatment in local hospitals.

SILVER ITEMS COMMEMORATE STATUE OF LIBERTY

The new 1986 Statue of Liberty Silver One Dollar coin design captures the fact that although the Statue of Liberty was unveiled in 1886 as a monument to Franco-American friendship, it soon became a symbol of hope and freedom for the great flow of immigrants who landed on nearby Ellis Island. Between 1892 and its closing in 1954, Ellis Island was host to some 70 percent of the 24 million immigrants entering the United States.

The obverse of this new legal tender U.S. $1 silver coin (*pictured below*), which is 90 percent pure silver, was designed by US Mint Sculptor Engraver, John Mercanti, and **portrays a majestic frontal view of the Statue of Liberty with a rendering of the Ellis Island immigration center in the background**.

The tie between the statue and immigration was strengthened in 1903 when a bronze plaque carrying a sonnet "The New Colossus" by poetess, Emma Lazarus, was affixed to the statue. The final lines of the sonnet read:

"Give me your tired, your poor,
Your huddled masses yearning to breathe free,
The wretched refuse of your teeming shore,
Send these the homeless, tempest-tost to me,
I lift my lamp beside the golden door!"

These words were the inspiration for the reverse of this $1 silver Statue of Liberty commemorative coin which shows Liberty's torch and the words: "Give me your tired, your poor, your huddled masses yearning to breathe free".

The "1986 Liberty Silver Dollar (Proof)" may be ordered from **The U.S. Mint**, Liberty Coin Program, P.O. Box 41996, Philadelphia, PA 19101. The regular price for this coin is $24.00, but if your order is sent soon enough to be received by the U.S. Mint before December 31, 1985, you will be entitled to purchase the coin at the Pre-Issue Discount Price of $22.50.

Looking back into history, the Tiffany Blue Book of 1893 listed Tiffany's sterling silver **Statue of Liberty souvenir spoon**. A second and third version were issued in 1901 and 1929. Now, to salute the Statue of Liberty centennial, Tiffany & Co. has reproduced its original Statue of Liberty souvenir spoon in elegant sterling silver as *pictured at left*.

This history-evoking spoon is listed in the Tiffany & Co. Fall Selection 1985 Blue book and may be purchased for only $65; a portion of this price will benefit the restoration of the Statue of Liberty and Ellis Island. For further information on ordering, call toll-free (800) 526-0649.

Another attractive tribute to the Statue of Liberty is the one oz. Lavin Liberty "coin" containing 999.5+ fine silver. As *pictured at left*, the obverse presents an effigy of the face of the Statue of Liberty and the dates 1886 and 1986 while the reverse depicts an American Eagle.

Additional information abut the Lavin Liberty "coin" may be obtained from **R. Lavin and Sons, Inc.**, North Chicago Refiners & Smelters Division, 2028 South Sheridan Road, North Chicago, Illinois 60064.

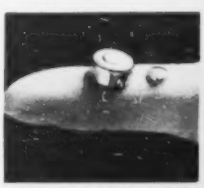
Novel silver pendants or key rings, showing a front view and back view of "Lady Liberty," *pictured above*, containing one half troy ounce of pure silver, are being offered by **SilveRefine Corp.**, P.O. Box 10, Orangeburg, N.Y. 10962.

SILVER INSTITUTE WELCOMES NEW MEMBER

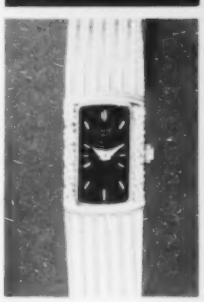
The Silver Institute warmly welcomes to membership Allgemeine Gold-Und Silberscheideanstalt A.G., Kanzlerstrasse 17, Postfach 140, D-7530 Pforzheim, Federal Republic of Germany, represented in Institute matters by its President, Sigvard Clasen. The Silver Institute's membership includes companies headquartered in 18 nations.

ANALOGUE WATCHES RELY ON SILVER POWER

The worldwide silver oxide-zinc battery market has passed the $400 million mark, and the largest proportion of that market is the miniature battery used for watches. **Silver oxide-zinc batteries are the world's preferred source of power for watches.** Some 60% of the European watches and 95% of Japanese watches require them because of their long life and greater current capacity.



It is the versatility of silver chemistry that has permitted the rapid move of the watch industry to miniaturization. *Pictured at right* resting on a human finger are tiny silver oxide watch batteries manufactured by the Union Carbide Corporation in its Battery Product Division in Danbury, Connecticut, illustrating newly developed reductions in size. Tiny, yes, but they still provide enough power to run a watch for over a year.



Over the past year or two, there has been a shift back to the traditional analogue watch face because many people still find it easier to visualize the day by looking at a traditional clock face. This market preference for analogue watch faces has expanded the market for silver oxide batteries because, as in the case of the new Bulova shown at right, analogue watches are best driven by silver oxide batteries. Their high efficiency movements operate best on the 1½ volts supplied by silver oxide batteries.

At a recent meeting of the Electrochemical Society, Roberto Serenyi, Manager of Research, Yardney Battery Division, Yardney Corp., Pawcatuck, CT, said, "Silver electrodes incorporated in miniature batteries are very versatile, offering almost unlimited options to the designer. This versatility, combined with high energy density, long life, good mechanical strength, and ease of manufacture makes them very desirable for many electrochemical systems."

In addition to watches, miniature silver oxide-zinc batteries provide top performance for calculators

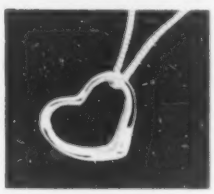
and heart pacers. Full size silver oxide batteries find wide use in commercial television cameras, commercial aircraft, and in a host of military applications, for they give the most power per unit weight of any battery system.

SILVER INSTITUTE ADVISED BERMUDA ON MINTING OF NEW SILVER DOLLAR

In October 1984, at the request of Bermuda authorities, Silver Institute staff consulted with the Bermuda Monetary Authority and the Bermuda Ministry of Finance.

These consultations resulted in the planning of a program for the annual issuance of crown size sterling silver Bermuda Dollars, beginning with a 1985 coin that would be an attractive souvenir to the many thousands of past, present, and future honeymooners and other tourists who visit Bermuda.

Converting plans into reality, in October 1985, Bermuda issued a new silver $1 Commemorative Crown coin (*above*) struck in 925 sterling silver proof and uncirculated conditions. Its reverse features a cruise liner viewed over the roof of a Bermuda Buttery, framed by coconut palm trees. The obverse depicts the new Raphael Maklouf effigy of a mature Queen Elizabeth II.



STERLING SILVER JEWELRY IS FASHIONABLE

In Italy, fashionable designer Marotto Riccardo uses massive links of pure silver to create pictured high fashion jewelry.

Tiffany's famous "Blue Book" catalogs for 1985 and for its Fall Selections include many truly beautiful statements in sterling by Paloma Picasso and Elsa Peretti and other talented jewelry designers—fluid swirl necklace, to a "Bone" cuff bracelet, to an open heart pendant (*pictured*), to a whimsical bow—but all artistic and all fashionable—with prices ranging from $45 to $975.

In presenting its collection of fashionable sterling silver chains, necklaces, pendants and bracelets, **Cazenovia Abroad** wrote, "Sterling is always in good taste and can be worn for all seasons, all occasions . . ." All of its catalog items were priced to retail between $9 and $336.

Since 1832, **Bailey Banks & Biddle** has served the wealthy of Philadelphia, PA and other major cities with fashionable, expensive designer jewelry. This year, it used a 4 color ad to state, "*Sterling silver shapes a new fashion trend*," and to display 11 pieces of splendid sterling silver jewelry. Cost? Between $95 and $495.

A surprising source of fashionable sterling silver jewelry is this year's "Jewelry Values" catalog published by the Amoco Oil Merchandise Center, 7822 South 46th Street, Phoenix, Arizona 85044. Out of 46 pages of jewelry, *12 pages were filled with sterling silver products*, many imported and most priced at under $50.

SUNSHINE EXPANDS SILVER PRODUCT LINE

In 1982, the 100-year old Sunshine Mining Company created Sunshine Bullion Co. and began selling silver direct to American investors. Since then, Sunshine's pure silver investment bars and "rounds" of bullion have captured an impressive and still increasing share of the investor market.

"Our initial success was due to offering investors the most competitive prices, products of the highest quality, and a guarantee to buy back Sunshine silver at the then current market price," said Jack Albans, President of Sunshine Bullion Co.

Now, Sunshine is expanding its product line to include pure silver cuff links, necklaces, key chains, belt buckles, and 999+ fine silver 1 oz. medallions celebrating Birthdays, Easter, Christmas, Graduations and other events. **Call toll-free 1-800-527-5769 for a copy of Sunshine's new catalog, "Silver—A Special Collection".**

1984 WORLD SILVER MINE PRODUCTION REPORTED

The Silver Institute's annual survey, "Mine Production of Silver", covering the period 1984–1988, shows that world output of silver continues at a substantial level with 400.9 million troy ounces produced in 1984 compared to 402.2 million ounces in 1983.

"Mine Production of Silver" is based on reports by 242 leading silver mining and related entities in 26 countries and includes 1984's actual production and remarkably accurate projections for 1985, 1986, 1987 and 1988 for each of the silver mining countries of the world.

The world's largest producer of silver in 1984 was Mexico with 63.9 million troy ounces, followed by Peru, Soviet Union, United States, Canada and Australia. "Mine Production of Silver 1984–1988", including names of the organizations that cooperated in its preparation, is available from The Silver Institute, Suite 101, 1026 16th Street, N.W., Washington, D.C. 20036 for only US $10.00.

LATEST SILVER INSTITUTE REFINING STATISTICS

Production and Disposition of **999 Silver** by All Known Refiners in the United States

	TROY OUNCES		MILLION TROY OUNCES		
	October 1985	September 1985	Jan-Oct 1985	Jan-Oct 1984	Full Year 1984
THESE REFINERS' PRODUCTION, BY SOURCE			MONTHLY RATE		
From Primary (ores & concentrates)	2,400,033	3,563,268	4.2	4.5	4.6
From Coins	0	0	0.0	0.0	0.0
From Old Scrap (used photo film & other products)	2,872,786	2,598,415	2.5	2.8	2.9
From New Scrap (in-plant clippings, waste)*	3,156,370	2,029,718	2.1	1.9	2.2
TOTAL PRODUCTION	8,429,189	8,191,401	8.9	9.2	9.7
DISPOSITION BY THESE REFINERS					
Converted in Plant (consumed in fabricating, etc.)	5,451,416	3,026,908	3.3	3.3	3.3
Shipped Out as 999 Silver	4,210,344	5,577,524	5.8	5.8	6.0
TOTAL DISPOSITION	9,661,760	8,604,432	9.1	9.0	9.3
RESULTING CHANGE OF THESE REFINERS'			TOTAL FOR PERIOD		
STOCKS (Production Minus Disposition)	−1,232,571	−413,031	−3.0	1.9	2.8
THESE REFINERS' STOCKS AT END OF PERIOD	948,884	2,181,455	0.9	3.0	3.9

Production and Disposition of **999 Silver** by All Known Refiners in Australia, Canada, Mexico, Peru, South Africa, Sweden, and West Germany; and some other Refiners in Europe and Asia.

	TROY OUNCES		MILLION TROY OUNCES		
	October 1985	September 1985	Jan-Oct 1985	Jan-Oct 1984	Full Year 1984
THESE REFINERS' PRODUCTION, BY SOURCE			MONTHLY RATE		
From Primary (ores & concentrates)	16,050,140	14,111,904	13.8	13.6	13.4
From Coins	138,718	112,288	0.1	0.1	0.1
From Old Scrap (used photo film & other products)	5,192,346	3,845,461	4.1	4.0	3.9
From New Scrap (in-plant clippings, waste)*	1,088,059	990,105	1.0	0.9	0.9
TOTAL PRODUCTION	22,469,263	19,059,758	18.9	18.6	18.3
DISPOSITION BY THESE REFINERS					
Converted in Plant (consumed in fabricating, etc.)	2,098,726	1,489,987	1.4	1.6	1.6
Shipped Out as 999 Silver	19,389,124	16,987,077	17.4	16.8	16.7
TOTAL DISPOSITION	21,487,850	18,477,064	18.8	18.4	18.4
RESULTING CHANGE OF THESE REFINERS'			TOTAL FOR PERIOD		
STOCKS (Production Minus Disposition)	981,413	582,694	1.0	1.6	−0.6
THESE REFINERS' STOCKS AT END OF PERIOD	6,261,928	5,280,515	6.3	7.5	5.3

* PRODUCTION From New Scrap is 999 silver made from in-plant clippings, spillage, sweepings, etc., generated during manufacturing processes.

THE SILVER INSTITUTE

A WORLDWIDE ASSOCIATION OF MINERS, REFINERS, FABRICATORS AND MANUFACTURERS

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THE SILVER INSTITUTE LETTER

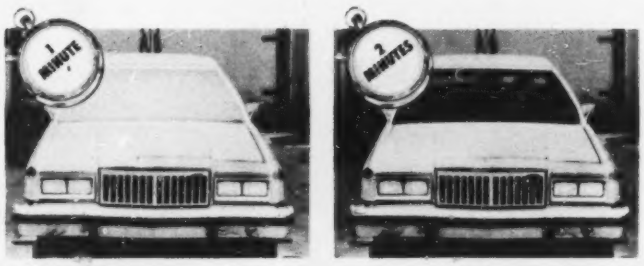
WORLDWIDE INFORMATION ON SILVER

VOLUME XV NUMBER 6 FEBRUARY 1986

SILVERED WINDSHIELD CLEARED OF ICE AND SNOW IN TWO MINUTES

The new silvered Insta-Clear windshield, introduced by Ford's Glass Division, is giving winter drivers a clearer view this season.

The Insta-Clear windshield technology is saving time and aggravation because it clears frosty winter windshields in as little as two minutes. "And more importantly," says Mike Meredith, Ford Glass Division's Automotive Products Group Manager, "it prevents one of winter driving's most common safety hazards—hastily scraped windshields that restrict the driver's field of vision to a small 'port hole' in the center."



Silver removes ice and snow in two minutes from Ford's new Insta-Clear windshield.

Now, with the all-new silver-based Insta-Clear system, in just about the time it takes to dust snow off the rest of the car, the entire windshield can be clear and ready.

Ford researchers at the Glass Tech Center in Lincoln Park, MI are hoping that Insta-Clear will be as popular as its enormously successful predecessor—the heated backlight. Both systems produce a snow-free, fog-free view, but their technologies are very different.

Heated backlights depend on small silver conductive ceramic lines printed on a single sheet of glass to heat the surface and melt the ice and snow.

Windshields are two sheets of glass sandwiched around a film of clear vinyl. With Insta-Clear, an additional extremely thin (100 billionths of a meter), completely transparent coating of silver and zinc oxide is applied to the inside surface of the outside piece of glass. A thicker band of silver—which acts as a conductor—is painted around the perimeter of the same surface and two lead wires run from the base of the windshield to the alternator. So, at the flick of a switch, the silver coating evenly conducts heat across the windshield and within minutes the snow and ice—or fog—disappear.

Ford plans to make Insta-Clear an option on all models and is investigating retrofit applications.

"FORTUNE" HONORS SILVER-POWERED "SWATCH"

"Fortune" Magazine included SWATCH in its list of the 12 best new products of the year.

After capturing the youth market of Switzerland, in 1984, one million of these long-lived, inexpensive molded plastic analog SWATCH watches—powered by miniature silver oxide batteries—were successfully marketed in the USA as a fashionable accessory which keeps very accurate time. Now 3.5 million of these silver-powered SWATCHES are being sold—still at the original price of only US $30 at fine stores throughout the USA.

CANADIAN 1986 SILVER DOLLAR ANSWERS QUESTION POSED BY 1981 SILVER DOLLAR

In 1981, the Royal Canadian Mint issued a silver dollar commemorating the 100th anniversary of the passing of an Act of Parliament to permit the building of the trans-Canada railway. When we purchased this coin, it immediately raised the question, "How long did it take to build this railway?", but then we turned our attention to other matters and forgot about our question.

But someone in the Royal Canadian Mint didn't forget the question, and now, it has been answered by Canada's new 1986 silver dollar (*pictured at right*) which commemorates a double centenary. First, it celebrates the arrival of

Canada's first transcontinental train to the west coast and secondly, the Centennial of the City of Vancouver.

The coin's reverse shows the "Pacific Express" train's Engine #371, which completed the historic rail crossing by pulling into the station at Port Moody, British Columbia on July 4, 1886—only one minute behind schedule. The skyline of contemporary Vancouver is in the background. The obverse bears the classic profile of Queen Elizabeth II.

This silver dollar is 50 percent fine silver and is part of the silver dollar series begun in 1935 with the striking of a coin to commemorate the 25th anniversary of the accession to the Throne of King George V. Since that time, 20 new silver dollars have been produced to commemorate historical events of national importance.

1981 Silver Dollar was the first to commemorate the Trans-Canada Railway.

This set has become a favorite among thousands of collectors of modern silver coinage because of: its limited mintage, reasonable pricing, artistic and universally appealing designs, the excellent quality of the minted coins, and because collectors strive to have a "complete collection"—a fact that provides them with a strong incentive for buying the newest coin in this silver dollar series.

The 1986 "frosted" proof dollar sells for US $14.40 and Canadian $18.00 and the brilliant uncirculated dollar sells for US $9.70 and Canadian $12.25 when ordered from the **Royal Canadian Mint, P.O. Box 478, Station A, Ottawa, Ontario, K1N 9L9,** Canada, before November 15, 1986.

NEW MEMBER WELCOMED

The Silver Institute warmly welcomes to membership **A-Mark Precious Metals, Inc.,** 9696 Wilshire Boulevard, 3rd Floor, Beverly Hills, California 90212, USA. Its official representative in Institute matters is its Senior Vice President, Bruce L. Kaplan.

OVER 200 NEW USES OF SILVER REPORTED IN "NEW SILVER TECHNOLOGY"

During 1986, the Silver Institute will study over 4,000 reports of new world-wide research on silver and its products and will publish 240 of the most important new uses of silver in its quarterly publication, **"New Silver Technology" (NST).** A few of the new, important applications of silver that are reported in the January 1986 issue of **NST** are highlighted below:

- Cells modified by silver ion treatment are useful in speeding up normal tissue growth and in changing the form of cancer cells.
- A wide range of gases can be detected by using a silver-impregnated porous silica glass.
- Silver nitrate treatment of Macadamia trees is shown to prevent premature dropping of fruit which greatly increases the yields of this valuable nut crop.
- Boron dramatically increases surface hardening and virtually eliminates tarnishing of abrasion resistant manganese-silver alloys.
- New silver capillary waveguide tubes show tremendous potential for transmission of laser power and also for optical imaging within a wide band of frequencies.
- A new silver-containing zeolite separates ortho-xylene, a high-tonnage raw material for synthetic fibers, resins, and plastics, from other aromatics by selective adsorption.

An annual subscription to the Institute's silver information search system **New Silver Technology** is available for *only US $45 per year* from **The Silver Institute, 1026 Sixteenth St., NW, Suite 101, Washington D.C. 20036.**

HECLA MINTS SECOND MEDALLION

The Hecla Mining Co. of Wallace, Idaho recently struck a medallion, containing 1 troy ounce of 999 fine silver, to commemorate its 1984 merger with Ranchers Exploration and Development Corporation, formerly headquartered in Albuquerque, New Mexico. These brilliant medals, depicting the new Silver Shaft headframe on the obverse and maps of Idaho and New Mexico on the reverse, can be purchased for US$14 each from Hecla Mining Co., Box 320, Wallace, Idaho 83873, USA.

HIGH FASHION STERLING SILVER ARROW FLIES

The Three Smokes Trading Co. 20-gauge sterling silver engraved arrow pin, hand-crafted by American Indian silversmiths in Gallup, New Mexico, is targeted at the chic fashion accessory market. Behind the flight of this silver arrow is Judith Rubins. She is a successful Beverly Hills attorney, a jewelry designer, and the owner of the small but thriving Three Smokes Trading Company. *She is pictured at right, wearing her sterling silver arrows.*

Ms. Rubins says that although she has always believed that Indian jewelry is "in" because "quality and good designs are always in"; she has been working with Indian silversmiths since 1984. "I had them simplify what they were doing, leave high polish shiny surfaces, and take away excess leaves and stamping," she notes. She took her own advice in the designing of her silver arrow brooch that can be worn fashionably on a glove, hat, belt, purse, boot or lapel. For additional information, write to **Three Smokes Trading Co., 8383 Wilshire Blvd., Suite 900, Beverly Hills, CA 90211,** USA.

INSTITUTE ASKS EPA TO PERMIT USE OF SILVER WATER TREATMENT SYSTEMS

On January 28, 1986, the Silver Institute made a presentation at a hearing of the Environmental Protection Agency (EPA) proposing that the EPA remove the Recommended Maximum Contaminant Level (RMCL) for silver from the primary drinking water standards and to list silver as a less restrictive secondary standard.

The Silver Institute questioned the validity of the formula that EPA has so far used in its RMCL for silver. This was based upon the assumption that if a 70kg man can develop Argyria in 2 to 3 years following the ingestion of 1 gram of silver, then the accumulation of 50 parts per billion of silver over 70 years will produce the same results. Experience does not support this theory, since only 3% of silver taken orally is retained by the body.

The Institute noted that **in over 100 years of treating drinking water with silver throughout the world, no cases of Argyria have ever been reported.** It also noted that silver sulfadiazine has been used to prevent burn infection for over 18 years, and no incidents of Argyria have been observed. Indeed, the *Pharmacological Basis of Therapeutics* makes no mention of any possibility of developing Argyria from the use of any silver-based therapeutic compound.

The Silver Institute said that Argyria is not a disease of distress to the health of the individual, and added that the presence of silver in the body may actually provide an *in situ* therapeutic effect. For example, one person with Argyria claims that although his body has been loaded with silver for the last 28 years, the only visible evidence of it is a slight discoloration in his eyes. He is rarely sick and never gets infections. He is completely convinced that the presence of silver in his body is a benefit to him.

The Institute also stated that in spite of the fact that some 28,200 industrial workers in the USA are engaged in day-to-day processing or handling of silver and its compounds, an analysis of all reports to the National Institutes of Health, including the Center for Disease Control, conducted in January 1986, failed to turn up any toxic-effect reports of Argyria during the past decade.

The Institute also called the EPA's attention to the fact that the current restrictive RMCL imposes a hardship on the general public which might find silver a viable alternative to other treatments of water for long term storage, swimming pools, and drinking water.

PURE SILVER STATUE HONORS VIETNAM DEAD

Under a licensing arrangement with the Vietnam Veterans Memorial Fund, 100 signed and numbered silver Vietnam Veterans Memorial statues (*pictured at right*) have been produced by Silversmiths Group International, Inc., said its Chairman, Philip R. Friedman.

These statues, each of which contains 1,000 troy ounces (70 pounds) of 999 fine silver, were created to "honor those brave Americans who gallantly fought and died in Vietnam to preserve our freedom, and a significant donation will be made to the VMMF on each sculpture" he added. Write: **Silversmiths Group International, Inc., 700 West Hillsboro Blvd., Deerfield Beach, FL 33441,** USA.

REFINED SILVER PRODUCTION FALLS FOR SECOND YEAR IN A ROW

As shown below the total production of refined silver by U.S. and non-U.S. participants in The Silver Institute refining series decreased by 0.1% from 336.3 million troy ounces in 1984 to 335.9 million troy ounces in 1985. This very slight decrease follows last year's 5.6% fall in output.

Production from primary ores was exactly the same as last year. Refining of secondary materials fell 0.3% due to 17.7% reduction on old scrap and coins, which was almost wholly offset by a 10% increase in new scrap refining. Stocks of silver held at U.S. refineries ended the year at an all time low.

LATEST SILVER INSTITUTE REFINING STATISTICS

Production and Disposition of **999 Silver** by All Known Refiners in the United States

	TROY OUNCES		MILLION TROY OUNCES		
	December 1985	November 1985	Full Year 1985	Full Year 1984	Full Year 1983
THESE REFINERS' PRODUCTION, BY SOURCE			MONTHLY RATE		
From Primary (ores & concentrates)	3,865,454	3,891,899	49.6	55.3	52.8
From Coins	0	0	0.0	0.0	0.3
From Old Scrap (used photo film & other products)	2,249,742	2,610,306	30.0	35.2	37.1
From New Scrap (in-plant clippings, waste)*	5,351,561	2,484,922	29.3	25.9	22.0
TOTAL PRODUCTION	11,466,757	8,987,127	109.0	116.4	112.2
DISPOSITION BY THESE REFINERS					
Converted in Plant (consumed in fabricating, etc.)	7,140,723	4,607,726	45.2	43.1	40.0
Shipped Out as 999 Silver	4,929,571	4,637,950	67.6	70.5	72.0
TOTAL DISPOSITION	12,070,294	9,245,676	112.8	113.6	112.0
RESULTING CHANGE OF THESE REFINERS' STOCKS (Production Minus Disposition)	−603,537	−258,549	−3.8	2.8	0.3
THESE REFINERS' STOCKS AT END OF PERIOD	86,798	690,335	0.1	3.9	1.2

Production and Disposition of **999 Silver** by All Known Refiners in Australia, Canada, Mexico, Peru, South Africa, Sweden, and West Germany; and some other Refiners in Europe and Asia.

	TROY OUNCES		MILLION TROY OUNCES		
	December 1985	November 1985	Full Year 1985	Full Year 1984	Full Year 1983
THESE REFINERS' PRODUCTION, BY SOURCE			MONTHLY RATE		
From Primary (ores & concentrates)	13,467,628	14,736,691	166.2	160.5	157.4
From Coins	394,493	156,523	1.5	1.2	2.6
From Old Scrap (used photo film & other products)	3,538,647	3,756,928	47.9	47.1	71.5
From New Scrap (in-plant clippings, waste)*	847,410	876,951	11.3	11.0	12.6
TOTAL PRODUCTION	18,248,178	19,527,093	226.9	219.9	244.1
DISPOSITION BY THESE REFINERS					
Converted in Plant (consumed in fabricating, etc.)	1,488,338	1,583,577	17.2	19.8	38.1
Shipped Out as 999 Silver	15,806,871	17,459,080	207.3	200.7	204.9
TOTAL DISPOSITION	17,295,209	19,042,657	224.4	220.5	243.0
RESULTING CHANGE OF THESE REFINERS' STOCKS (Production Minus Disposition)	952,969	484,436	2.4	−0.6	1.2
THESE REFINERS' STOCKS AT END OF PERIOD	7,699,333	6,746,364	7.7	5.3	5.9

* PRODUCTION From New Scrap is 999 silver made from in-plant clippings, spillage, sweepings, etc., generated during manufacturing processes.

THE SILVER INSTITUTE
A WORLDWIDE ASSOCIATION OF MINERS, REFINERS, FABRICATORS AND MANUFACTURERS
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THE SILVER INSTITUTE LETTER

WORLDWIDE INFORMATION ON SILVER

VOLUME XVI NUMBER 2 APRIL 1986

SILVER "LIFECARD" MAY SAVE YOUR LIFE!

An unconscious, bleeding patient is rolled into the Emergency Room of a hospital. Among the patient's identification papers is a wallet-size plastic card, called "LifeCard" by Blue Cross and Blue Shield of Maryland.

Data on this silver-striped laser recordable DREXON plastic card is quickly "read" by a low power semi-conductor laser. Within seconds, this data is passed to the Emergency Room staff.

By having immediate knowledge of the patient's blood type, allergies, and other aspects of his medical history, the Emergency Room can rapidly take action to save the patient's life and to speed him on to the road to recovery.

The "LifeCard" is being field tested among the 1.6 million members of Blue Cross of Maryland, Inc. The Blue Cross has been working on this silver-based laser memory card medical information system under a license from **Drexler Technology Corporation,** 2557 Charleston Road, Mountain View, CA 94043 for almost two years.

This silver-based system offers numerous advantages over contemporary magnetic memory methods. For example, **the black magnetic stripe on the reverse of the common plastic credit card will store 212 letters and numbers while a silver-striped DREXON card can hold 700,000.**

This translates into a card that is capable of carrying your entire medical history, including childhood diseases, EKGs, and even miniaturized pictures of criti al x-rays.

And after that, it would still have room for your bank accounts and credit lines, as well as a running financial statement for Cash Cards. And there would still be room for even more information—storage space that is directly attributable to the high resolution attainable with the silver emulsion.

Another advantage is to be found in the fact that data can be stored for 10 years on silver-based discs without expensive maintenance because of silver's resistance to oxidation.

MEXICO ISSUES FIRST COMMEMORATIVE SILVER PROOF COIN

The Banco de Mexico recently announced the minting of 20,000 silver proof 500-Peso coins commemorating the 75th anniversary of the beginning of the Mexican Revolution of 1910. The coin is 925 fine silver and contains 1 troy ounce of pure silver.

This handsome coin's obverse (*pictured at right*) bears from left to right, the profiles of four heroes of the Revolution: General Zapata with large "sombrero", President Madero, General and Aviator Carranza, and Pancho Villa wearing a western hat. The reverse shows the Mexican national emblem.

In Mexico, this coin is distributed exclusively by Silver Institute member, **Banca Cremi,** Metals & Minerals Division, Paseo de la Reforma 144, 06600 Mexico City, D.F., Mexico. In the US, the coin may be bought for $40.00 (including shipping and handling) from **Colonial Coins Inc.,** 909 Travis, Houston TX 77002 as long as they last. For more information call (800) 231-2392 or in Texas (800) 392-4716.

SILVER INCENTIVE AWARDS...ARTISTIC, PRECIOUS AND AFFORDABLE

Silver is not like most of the products that are being touted as premiums and incentive awards.

Silver's beauty is still universally admired and centuries of changing cultural tastes and values have not diminished its desirability.

Popular Tiffany Silver Premium Awards

During the 150-year history of New York's famous Tiffany & Co., *Fortune*-500 company chairmen, national political leaders, and sponsors of sporting events have visited its showrooms, now at Fifth Avenue, to buy Tiffany silver products for presentation or incentive awards.

Many Tiffany & Co. sterling silver presentation medals, swords, punch bowls, pins, and trophies of the past can be seen in some of the world's most prestigious museums.

Today, award winners are motivated by the beautiful personalized silver jewelry designed by Tiffany's Elsa Peretti and Paloma Picasso, and by many other silver products of this Silver Institute member, such as Tiffany pens and the Manpower pendant that is awarded to its most outstanding employees.

In addition to silver jewelry awards, the pure **silver ingots and bars produced by Silver Institute members Degussa, Engelhard, Johnson Matthey, the Royal Canadian Mint, and Sunshine Bullion Co. can be impressive and effective awards,** bearing company logos as well as names of award winners, etc.

Engelhard Corporation's "family" of different weight pure silver **"Prospector" medallions** and Sunshine Bullion Co.'s silver coin-like **"Sunshines"** have been used successfully to attract new accounts to financial institutions and as sweepstake awards.

Silver Medallions make Excellent Premiums

Other silver award medallions created by Tiffany & Co., Johnson Matthey, Sunshine Bullion, and the Royal Canadian Mint have featured the busts of company founders, Olympic athletes, historical figures, corporate logos, names of award winners, and other data that make them motivators and cherished possessions of the outstanding people that have received them.

And **even though silver has seldom been as affordable as it is today, its perceived value is extremely high.** So high that hundreds of people were sufficiently motivated by the idea of receiving a free 1-gram JM pure silver bar (worth less than 25 cents) to brave bad weather to attend a charity fund-raiser.

Silver awards will be displayed at the Silver Institute Booth #2070, Premium Incentive Award Show on May 5-8, in the Jacob K. Javits Convention Center, New York.

DEMAND INCREASES FOR SOPHISTICATED SILVER JEWELRY

"Europeans have long worn sterling silver jewelry with pride. According to many Canadian jewelers, the same thing is happening in Canada now. This new popularity of sterling silver jewelry originated in fashion-setting Quebec . . ." reported ***The Silver Institute Letter*** in December 1983.

Silver from Mexico Courtesy, The Phoenix, Washington, D.C.

In the USA, according to a story by Patricia A. Dreyfus in the February 1986 issue of ***Money*** magazine, New York City's Tiffany & Co. has been promoting the work of top silver jewelry designer, Elsa Peretti, since 1974. And now Pablo Picasso's daughter Paloma has also produced a collection of beautiful silver pins, rings, bracelets, and necklaces for Tiffany & Co. Priced between $45 and $2,200, the Picasso items are "selling well".

During 1985, prestigious European, Canadian, and US jewelry trade publications—such as ***Europa Star*** and ***Jewelers' Circular Keystone***—carried stories indicating **a surging jeweler demand for silver jewelry of the highest quality design and craftsmanship.**

And now, fine sterling silver jewelry can be purchased at department stores such as Marshall Field in Chicago, Neiman-Marcus in Dallas, and Saks Fifth Avenue in New York as well as at better jewelry stores throughout the United States.

And the trend continues. A story by Cheryl Kremkow in a recent issue of the magazine for Western jewelers, ***The Goldsmith,*** proclaimed, "Sophisticated sterling silver jewelry in beautiful sculptured shapes has hit the fashion charts—with a bullet. **A new generation of well-crafted earrings, cuffs, bangles, necklaces, and beads is putting silver on the pages of fashion magazines and on women all over the West.** The silver trend, evident last year, is even more important this spring. Its cool color looks right, day or night."

US TREASURY MARKETS LIBERTY SILVER DOLLAR AS COMMEMORATIVE COIN AND AS INCENTIVE AWARD

Before launching its national TV and print media advertising campaign, the US Department of the Treasury made an astute and unprecedented move. It created a two-page advertisement inviting businesses to plan their premium and incentive activities around the ***pictured*** US Liberty Silver Dollar.

Treasury's ad is appearing in the March and April editions of the two most important publications of the premium/incentive industry, *Incentive Marketing* and *Premium/Incentive Business*.

The ad calls attention to the fact that **the US Liberty Silver Dollar is indeed a unique memento because:** it is the only legal tender silver coin to feature the Statue of Liberty; a portion of the purchase price of each coin will be used for the future maintenance of the Statue and Ellis Island, so the Liberty Silver Dollar is a coin that both customers and employees will be proud to own; this coin has a depth, weight, and elegance not found in ordinary coins—and it is 90% pure silver.

It also noted, "The regular price of the Silver Dollar is $24.00. . .but discounted prices for your premium and incentive programs are available if your total order is at least $25,000."

The US Treasury calls the Liberty Silver Dollar "a treasure today, a valuable heirloom tomorrow" and explained, "At the end of 1986, the dies will be destroyed and no more coins will be minted."

Did premium/incentive buyers respond to this advertising?

Although Coin Program employees are visibly excited and enthusiastic over an initial response to the first ads that numbered in the "hundreds", exact data are not yet available. However, the Assistant Director of Advertising and Public Relations of the Department of Treasury, Brian O'Donnell said, **"The response is very positive and much larger than we had expected."**

To assure adequate distribution of the Liberty Silver Dollar, the Department of the Treasury has arranged for their sale through 19,000 retail outlets located in all 50 states. Outlets include stores such as Sears, Montgomery Ward, Abraham & Straus, K-Mart, and many other firms in addition to 4,500 banks and other financial institutions.

Retail sales efforts are being supported by extensive advertising and promotional efforts on national TV and in major print media. The names and addresses of individual Liberty Silver Dollar dealers will be printed in regional or state issues of national publications.

More information may be obtained from **The US Liberty Coin Program, Department of the Treasury, 1730 K Street, N.W., Washington, D.C. 20220.** The Liberty Silver Dollar will be on display and information will be available at The Silver Institute booth, #2070 and 2072 at the 48th Annual Premium Incentive Show at the new Jacob K. Javits Convention Center, New York, May 5-8, 1986.

INSTITUTE WELCOMES NEW MEMBER

The Silver Institute warmly welcomes to membership the **Southern Peru Copper Corporation**, 180 Maiden Lane, New York, New York 10038 and its President and Chief Executive Officer, Charles G. Preble, as its official representative in Institute affairs.

WORSHIPFUL COMPANY OF GOLDSMITHS DIRECTOR VISITS SILVER INSTITUTE

Mr. Peter Gainsbury, Director of Design and Technology, **The Worshipful Company of Goldsmiths** in London, visited the Administrative Offices to discuss the proposed International Promotion of Silver Campaign. Mr. Gainsbury is active in silver promotion programs in Great Britain and Europe.

A CAUTIOUS INVESTOR'S GUIDE TO SILVER INVESTMENTS

If you are considering the possibility of investing in any of the silver investment opportunities—such as bullion bars, coins, medallions, silver certificates, mutual funds, and mining stock—we strongly recommend Daniel M. Kehrer's recently published book entitled, **THE CAUTIOUS INVESTOR'S GUIDE TO PROFITS IN PRECIOUS METALS**. Available for $18.95 from **Times Books**, 201 E. 50th St. NYC 10022 or in USA call (800) 368-6460, in Europe, European Book Services, Flevolaan 36–35, P.O. Box 124, 1308 Ac Weesp, The Netherlands.

REFINED SILVER PRODUCTION LOWER THAN IN 1985

As shown below the production of refined silver by US and non-US participants in The Silver Institute refining series was at a somewhat lower rate than during the same period in 1985. The decline of world production of 1.8% from 27.5 million troy ounces per month in 1985 to 27 million troy ounces per month in 1986 was due to a steep fall in US Primary Production offset partially by an increase in US Old Scrap and New Scrap output.

LATEST SILVER INSTITUTE REFINING STATISTICS

Production and Disposition of **999 Silver** by All Known Refiners in the United States

	TROY OUNCES		MILLION TROY OUNCES		
	February 1986	January 1986	Jan-Feb 1986	Jan-Feb 1985	Full Year 1985
THESE REFINERS' PRODUCTION, BY SOURCE			MONTHLY RATE		
From Primary (ores & concentrates)	2,599,439	3,495,715	3.0	4.2	4.1
From Coins	0	0	0.0	0.0	0.0
From Old Scrap (used photo film & other products)	2,824,456	2,760,374	2.8	2.5	2.5
From New Scrap (in-plant clippings, waste)*	2,411,481	1,641,361	2.0	1.5	2.4
TOTAL PRODUCTION	7,835,376	7,897,450	7.9	8.2	9.1
DISPOSITION BY THESE REFINERS					
Converted in Plant (consumed in fabricating, etc.)	4,752,116	3,883,449	4.3	2.7	3.8
Shipped Out as 999 Silver	2,929,414	3,725,669	3.3	4.8	5.6
TOTAL DISPOSITION	7,681,530	7,609,118	7.6	7.4	9.4
RESULTING CHANGE OF THESE REFINERS'			TOTAL FOR PERIOD		
STOCKS (Production Minus Disposition)	153,846	288,332	0.4	1.5	−3.8
THESE REFINERS' STOCKS AT END OF PERIOD	528,976	375,130	0.5	5.4	0.1

Production and Disposition of **999 Silver** by All Known Refiners in Australia, Canada, Mexico, Peru, South Africa, Sweden, and West Germany; and some other Refiners in Europe and Asia.

	TROY OUNCES		MILLION TROY OUNCES		
	February 1986	January 1986	Jan-Feb 1986	Jan-Feb 1985	Full Year 1985
THESE REFINERS' PRODUCTION, BY SOURCE			MONTHLY RATE		
From Primary (ores & concentrates)	13,956,291	14,391,727	14.2	14.4	13.9
From Coins	136,680	176,550	0.2	0.1	0.1
From Old Scrap (used photo film & other products)	4,014,364	3,685,203	3.8	3.9	4.0
From New Scrap (in-plant clippings, waste)*	981,948	870,056	0.9	0.9	0.9
TOTAL PRODUCTION	19,089,283	19,123,536	19.1	19.3	18.9
DISPOSITION BY THESE REFINERS					
Converted in Plant (consumed in fabricating, etc.)	1,560,504	1,703,516	1.6	1.3	1.4
Shipped Out as 999 Silver	17,633,969	17,080,367	17.4	16.3	17.3
TOTAL DISPOSITION	19,194,473	18,783,883	19.0	17.5	18.7
RESULTING CHANGE OF THESE REFINERS'			TOTAL FOR PERIOD		
STOCKS (Production Minus Disposition)	−105,190	339,653	0.2	3.5	2.4
THESE REFINERS' STOCKS AT END OF PERIOD	7,933,796	8,038,986	7.9	8.7	7.7

* PRODUCTION From New Scrap is 999 silver made from in-plant clippings, spillage, sweepings, etc., generated during manufacturing processes.

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THE SILVER INSTITUTE LETTER

WORLDWIDE INFORMATION ON SILVER

VOLUME XVI NUMBER 3 JUNE 1986

MEXICO HOSTS OUTSTANDING ANNUAL MEETING

Mexico hosted the sixteenth Annual Meeting of the Silver Institute, held at the Hotel Camino Real in Mexico City, Mexico on May 19 and 20. It will long be remembered as the meeting at which the Silver Institute proposed a multi-million dollar international promotion of the sale of silver consumer products and for a spectacular display of magnificent Mexican silver jewelry and giftware.

Mr. Miguel Mancera, Director General, Banco de Mexico (left) and Mr. Werner Knies, Degussa, President of the Institute.

Over 60 representatives and guests of Silver Institute members attended the welcoming reception hosted by Silver Institute member, **Banca Cremi S.N.C.** on May 18.

A larger group, including representatives of Mexican governmental organizations, mining groups, and silver consumer goods manufacturers, attended the luncheon, the presentation of the international silver market development program, a reception, and banquet organized by the Managing Director of **Frisco S.A., de C.V.** and Vice President of the Silver Institute for Mexico and Central America, Jorge Ordoñez and his staff led by Manuel Moreno. The reception for this large group was generously hosted by **Industrias Peñoles, S.A. de C.V.,** long-time member of the Institute.

The Meeting closed with an address by Mr. Miguel Mancera, Director General, Banco de Mexico, who called for early attention to the promotion of greatly increased silver purchases by consumers.

On May 20, the Silver Institute members were invited by Hector R. Calva, Director General, and Juan Sanchez-Navarro R., Commercial Director, of **Industrial Minera Mexico, S.A.** to their silver mine in Taxco where they were taken underground and also toured the mill. After a luncheon hosted by the Mine Manager, Jorge Uribe, the group visited Taxco's famous silversmiths and the sixteenth century Santa Prisca Church.

INSTITUTE PRESIDENT CALLS FOR INTERNATIONAL PROMOTION OF SILVER

On the opening day of the Silver Institute's Annual Meeting, May 19, Institute members attended meetings of the Operations Committee and the Executive Committee, chaired respectively by Edward W. Hoffstatter of Sharps, Pixley Inc. and Werner Knies of Degussa. Following these meetings, Silver Institute President, Werner Knies, spoke at the Annual Meeting Luncheon.

"Rather than say that there is an oversupply of silver," Mr. Knies said, "it might be better to say that there is a lack of demand for certain silver products, namely sterling ware and jewelry, where silver usage suffered a remarkable drop in demand from 123 million troy ounces in 1966 to 43 million ounces in 1985."

What can be done to recover markets which have been seriously weakened? Mr. Knies said, "I think there is only one way to achieve something, and that is to mount a professional, well-run promotion. Silver, as we all know, is a beautiful and valuable metal, which has a long and good looking record in sterling ware and jewelry. **Silver has not lost any of its properties, but it has become the most neglected and under-marketed of the precious metals."**

Regarding the management of a silver promotion campaign, he reminded the Institute members, "The Silver Institute was incorporated in New York City in 1971 to promote the use of silver in industry, commerce and the arts," and added, "If at that time it was considered necessary to promote silver, then it is absolutely necessary now."

In conclusion, Mr. Knies pointed out that although he is well aware of the difficult financial situation of the mining industry, he believes it should support the Silver Institute's proposed promotional activities because **the cost of an effective promotional campaign would be only a very small fraction of the total revenues which the miners realize from the resulting sales of silver.**

A MEASURABLE IMPROVEMENT IN SALES OF SILVER IS ACHIEVABLE

Also on May 19, the Managing Director of Frisco, S.A. de C.V., Jorge Ordoñez, presided over a well-attended two-part presentation of a multi-million dollar Silver Market Development Program to be carried out by The Silver Institute.

The first presentation was by **Harkness W. Cram,** Marketing Consultant who had directed the DeBeers diamond marketing program in the United States for six years, and the second presentation was by **Robert Demuth**, representing one of the world's largest advertising agencies, **J. Walter Thompson** (JWT).

Both presentations called for a program of trade cooperation, publicity and advertising.

Research by Mr. Cram and J. Walter Thompson would indicate that the **chances of success of a generic silver market development program to increase sales of silver consumer goods are improved** because of the good economic situation in the US, excellent fashion timing, favorable major changes in American consumer attitudes, and achievable trade support.

JWT noted that additional research is needed on some fundamental questions; however, subject to any changes dictated by research results, both organizations believe that **a measurable improvement in sales of sterling ware and silver jewelry can be achieved through trade cooperation and communicating the beauty, purity, magic, history, quality, durability, styling, prestige, affordability, and lasting value of silver through the use of appropriate advertising and publicity.**

Following the presentations, the Executive Director of the Silver Institute, John H. Lutley, outlined the program's budget. A Steering Committee was formed to advise on possible levels of funding and which parts of the program could be financed at the present time.

NEW USES OF SILVER DESCRIBED

The extension of silver uses into many new areas was described by the Executive Director of The Silver Institute, John H. Lutley, to a meeting of the Capital Metals Forum in Washington, D.C. on April 19 and to the Mexican Section of the AIME in Mexico City on May 21.

Among the new uses of silver are: high-performance electronics components; solders used to reliably bond billions of joints every day in the most advanced electronics components assembly plants; bearings of railway locomotives, seagoing ships, and in future high-temperature automotive lubricant formulations; **the modification of human cells into basic forms useful for healing, tissue regeneration, and tumor regression;** the purification of drinking water; the treatment of burn victims; in helping orchards preserve their crops through prevention of premature dropping of fruits and nuts; heat-reflecting architectural glass; and in Ford's "Insta-Clear" automobile windshields.

Mr. Lutley also noted that the silver oxide-zinc battery market has passed the $400 million mark with the majority of this market being in miniature batteries for watches.

He closed his talk by describing a silver-based memory card medical information system which will hold 700,000 letters and numbers, as compared with a limit of 212 characters that can be stored in the black magnetic strip on the back of the common plastic credit card.

SILVER'S PENETRATION OF $20 BILLION AWARDS MARKET DOUBLES

The Silver Institute exhibit at the 1986 NY Premium Incentive Show was an exciting place to be in May. The display of sparkling pure silver bars, coins and medallions, and sterling silver jewelry was outstanding and attracted over 1,000 buyers.

Many buyers returned to talk about the successful use of silver premiums and awards based on past guidance from booth personnel. Others came to look at the new silver products provided by **A-Mark Precious Metals, Degussa, Engelhard, Royal Canadian Mint, Sunshine Mining Co., Tiffany & Co.,** and the **U.S. Treasury Department.** And still others came to find out how to best use silver in their programs or where to buy silver products.

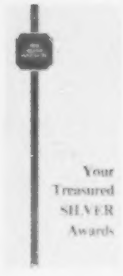
In addition to advice and publications from Silver Institute booth personnel, qualified staff members of Engelhard, Sunshine Mining, and Tiffany & Co. worked part-time to provide buyers with greatly appreciated on-the-spot expert advice.

Of the registered buyers who visited the booth, 606 participated in the Institute's survey on their use of silver premiums and awards, silver product preferences, priority interests, and any plans for future use of silver awards.

When the Silver Institute first attended the New York Premium Incentive Show in 1983, of the 600+ buyers who were interested in silver premiums and awards **only 24% had ever used silver in their**

programs. This use of silver has been expanded each year and a survey this year revealed that out of 606 buyers, 48% had used and are now using silver premiums and awards in their programs. As a result of their visit to the booth this year an additional 16% of them plan to begin using silver within the next six months.

"YOUR TREASURED SILVER AWARDS"

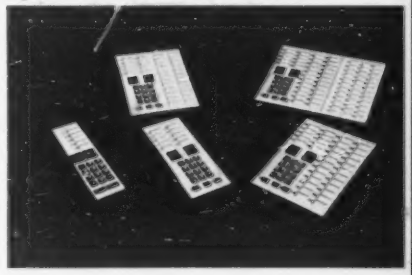


The Silver Institute recently published the booklet, "Your Treasured Silver Awards" to explain how and why companies have been using silver awards. Case histories describing successful uses of silver ingots, coins, medallions, and jewelry and accessories are also included.

This publication should be very useful to all companies that are considering using silver premiums and awards for the first time. It can also be a valuable marketing support tool for firms that manufacture silver consumer products that can be used in premium incentive award programs. Write for special prices for quantity orders, or order a single copy for only $1.50, including postage and handling, from The Silver Institute, Suite 101, 1026 Sixteenth St., NW, Washington, DC 20036.

SILVER MEMBRANE SWITCHES REPLACE PUSHBUTTONS

The family of AT&T telephones pictured at right depend upon high-performance silver-membrane switches. The operator need only press the designated surface area, and the silver-coated membrane makes positive contact with its opposing silver layer, activating the electronics that permit conversation to begin. When pressure is removed, the resilient, flexible membrane breaks its contact and returns to its original open position.



Silver-coated membrane switches are now preferred, for their useful life is about 10 million operations — far in excess of any other type of make-and-break switches.

But silver plays a second more subtle role in the membrane switch. Silver is a powerful oxidation catalyst. Its use in the chemical industry is crucial for the production of ethylene oxide, the essential building block for DuPont's "Mylar" film, the membrane of the membrane switch.

DuPont's "Mylar" is one of the miracles of modern chemistry — as a flexible packaging material it is ideal as the container of processed frozen foods, and as a flexible carrier for magnetic materials it is the ideal film for videotape, audiotape, computer tape, and floppy disks.

In addition to its broad use in packaging and magnetic media, "Mylar" film is the material that makes membrane switches work. Because of their simplicity and durability, membrane keyboard switches are fast replacing pushbutton switches for telephones, TV sets, calculators, and computers, as well as all types of industrial controls.

MANY NEW USES OF SILVER REPORTED

Members of the Silver Institute and annual subscribers to the quarterly publication ***New Silver Technology*** (NST) are kept informed of the 240 most important new applications of silver technology each year through their subscriptions to NST. Some of the important developments reported in the April edition of NST are listed below:

- **Aircraft safety** can be enhanced by coating the titanium housings of turbojet engines with heat-dissipating, thermally conductive silver alloy.
- The strength of **ceramic-metal bonds** using a silver brazing alloy is improved approximately 50-fold by means of new bonding technique.
- **Eyeglass lenses** made of light-weight plastic can be made photochromic by a thin film incorporating silver.
- **An improved silver lubricant** can protect the sliding parts of wrist watches for more than a decade.

Order your subscription to NST by sending in your check and the following Order Form today.

. . . . . .

ORDER FORM FOR "NEW SILVER TECHNOLOGY"

Annual Subscription to New Silver Technology for 1986 (US $45)

Enclosed is my check for US $45.00 made payable to **The Silver Institute,** Suite 101, 1026 Sixteenth St. NW, Washington DC 20036.

NAME: _____ COMPANY: _____
(Please print)

ADDRESS: _____

_____

REFINED SILVER PRODUCTION CONTINUES LOWER THAN IN 1985

As shown below the production of refined silver by US and non-US participants in The Silver Institute refining series continued at a lower rate than during the same period in 1985. The decline in world production of 4.3% from 27.8 million troy ounces per month in 1985 to 26.6 million troy ounces per month in 1986 during the same period, was due to a continued sharp reduction in US primary production and a decline in non-US primary production. These were somewhat offset by increases in scrap output.

LATEST SILVER INSTITUTE REFINING STATISTICS

Production and Disposition of 999 Silver by All Known Refiners in the United States

	TROY OUNCES		MILLION TROY OUNCES		
	April 1986	March 1986	Jan-Apr 1986	Jan-Apr 1985	Full Year 1985
THESE REFINERS' PRODUCTION, BY SOURCE			MONTHLY RATE		
From Primary (ores & concentrates)	3,153,055	3,138,294	3.1	4.2	4.1
From Coins	0	0	0.0	0.0	0.0
From Old Scrap (used photo film & other products)	2,643,519	2,248,952	2.6	2.5	2.5
From New Scrap (in-plant clippings, waste)*	2,930,544	1,952,444	2.2	1.9	2.4
TOTAL PRODUCTION	8,727,118	7,339,690	7.9	8.6	9.1
DISPOSITION BY THESE REFINERS					
Converted in Plant (consumed in fabricating, etc.)	4,914,028	3,674,403	4.3	3.0	3.8
Shipped Out as 999 Silver	3,720,033	3,615,884	3.5	5.7	5.6
TOTAL DISPOSITION	8,634,061	7,290,287	7.8	8.7	9.4
RESULTING CHANGE OF THESE REFINERS'			TOTAL FOR PERIOD		
STOCKS (Production Minus Disposition)	93,057	49,403	0.6	−0.4	−3.8
THESE REFINERS' STOCKS AT END OF PERIOD	671,436	578,379	0.7	3.5	0.1

Production and Disposition of **999 Silver** by All Known Refiners in Australia, Canada, Mexico, Peru, South Africa, Sweden, and West Germany; and some other Refiners in Europe and Asia.

	TROY OUNCES		MILLION TROY OUNCES		
	April 1986	March 1986	Jan-Apr 1986	Jan-Apr 1985	Full Year 1985
THESE REFINERS' PRODUCTION, BY SOURCE			MONTHLY RATE		
From Primary (ores & concentrates)	12,147,185	13,444,358	13.5	14.3	13.9
From Coins	10,154	10,032	0.1	0.1	0.1
From Old Scrap (used photo film & other products)	4,113,888	4,883,866	4.2	3.9	4.0
From New Scrap (in-plant clippings, waste)*	852,115	1,008,246	0.9	0.9	0.9
TOTAL PRODUCTION	17,123,342	19,346,502	18.7	19.2	18.9
DISPOSITION BY THESE REFINERS					
Converted in Plant (consumed in fabricating, etc.)	1,678,967	1,958,557	1.7	1.3	1.4
Shipped Out as 999 Silver	15,922,930	16,533,864	16.8	17.5	17.3
TOTAL DISPOSITION	17,601,897	18,492,421	18.5	18.8	18.7
RESULTING CHANGE OF THESE REFINERS'			TOTAL FOR PERIOD		
STOCKS (Production Minus Disposition)	−478,555	854,081	0.6	1.4	2.4
THESE REFINERS' STOCKS AT END OF PERIOD	8,309,322	8,787,877	8.3	6.7	7.7

* PRODUCTION From New Scrap is 999 silver made from in-plant clippings, spillage, sweepings, etc., generated during manufacturing processes.

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THE SILVER INSTITUTE LETTER

WORLDWIDE INFORMATION ON SILVER

VOLUME XVI NUMBER 4 AUGUST 1986

SILVER VALLEY NOW SELLS IDAHO SILVER TO VISITORS

Eleven months ago, The Silver Institute suggested that the silver mining community in Silver Valley, Idaho, provide visitors the opportunity to purchase beautiful objects made of silver mined in this world famous, historic valley.

The Silver Valley Economic Development Committee (SVEDC) actively supported this idea and on June 25, 1986, the Idaho Silver Shop opened its doors in Wallace, Idaho and began marketing a wide variety of silver products that use "local-grown" silver from area mines, reported Mr. Harry Magnuson of **H. F. Magnuson Company** of Wallace, Idaho.

The new silver shop features everything from silver belt buckles to baby gifts. Silver chains, silver picture frames, wedding gifts, silver medallions and silver souvenirs of the Silver Valley are among the many products sold, says Vickie Stanley, Idaho Silver Shop manager. She added, "We will be creating and selling items unique to ourselves and unique to the area."

Ms. Stanley, an experienced jeweler, will also offer custom silver designing and jewelry repair work. In the future, the Idaho Silver Shop hopes to expand its manufacturing activities to include casting, stamping, electroplating, and etching. And it hopes to eventually act as a marketing arm for local artists in silver.

According to Wallace businessmen, the Idaho Silver Shop is a first step in the promotion of Idaho Silver as an identifiable, marketable item.

INTERNATIONAL SILVER PROMOTION STEERING COMMITTEE FORMED

The President of The Silver Institute, Werner Knies of Degussa, has named the following Institute members to form the International Silver Promotion Steering Committee: Canadian Members—Keith C. Hendrick, Noranda Minerals Inc. and Neil M. Kemp of INCO Ltd.; **Mexican Members**—Jorge E. Ordonez C., of Frisco, S.A. de C.V., Pedro Sanchez Mejorada C. of Industrias Peñoles, S.A. de C.V., and Juan Sanchez-Navarro R., Industrial Minera Mexico, S.A.; **Peruvian Members**—Alberto Benavides Q. of Cia. de Minas Buenaventura, S.A., and Victor R. Eyzaguirre of CENTROMIN; **US Members**—Arthur Brown of Hecla Mining Co., William R. Chaney of Tiffany & Co., and Robert Muth of ASARCO Inc.

This Silver Institute Committee is to determine the level of funding for this important promotion of silver usage, to raise funds, and then to direct and control an appropriate promotional effort. Its first meeting will be chaired by President Knies and held on October 7 in Las Vegas, Nevada, the day before The Silver Institute Fall Meeting.

SUNSHINE MINING EXPLORES NEW FRONTIERS

After more than 100 years as a major silver mining company, the Sunshine Mining Co. today is the only vertically integrated silver mining company in the USA—mining, refining, minting, and marketing its silver.

Sunshine Bullion Company, a wholly owned subsidiary of Sunshine Mining, was formed in 1979 for the express purpose of selling the mine's silver production directly to investors. **Sunshine Bullion, P.O. Box 214509, Dallas, TX 75221,** markets rounds and ingots of 999.5 fine silver, as well as limited edition proof sets and commemorative pieces. The company credits its success to stringent silver standards, competitive pricing, and client production. This success has prompted the expansion of its bullion based business to include fine collectibles.

Recent projects include Sunshine Bullion's first catalog, a silver medallion commemorating Texas A&M's 1985 Southwest Conference and

1986 Cotton Bowl championships, and a cooperative effort with Texas' Capitol Restoration Committee in the development and marketing of a special silver Sesquicentennial celebration Lone Star Flag and Medallion set.

In the months ahead, the company will continue to expand its line into several new product areas. Plans include a holiday catalog featuring limited edition medallions, fine silver jewelry and ornaments, sculpture, and gift items. In the near future, the line will be expanded further to include a broad range of collectibles.

According to a company spokesperson, "Sunshine Bullion is very excited about the new areas we're exploring, but intends to ensure that the cornerstone of our business—the marketing of silver bullion to investors—remains a healthy and growing one for many years to come."

MORE THAN 13 MILLION OUNCES OF SILVER USED IN COINAGE

During 1985, 76 regions used 13,444,715 troy ounces of pure silver in the mintage of 252 issues of coins, according to the Silver Institute's authoritative annual publication, ***Modern Silver Coinage 1985.*** In comparison, in 1981 only 5.9 million ounces of silver were used in coinage.

The five largest producers of silver coinage in 1985 were Mexico (3.5 million troy ounces), France (2.2 million troy ounces), Austria (1.5 million troy ounces), United States of America (825 thousand troy ounces) and Canada (501 thousand troy ounces). ***Modern Silver Coinage 1985*** was published in August, based on data supplied by each mint that issued silver coins.

Modern Silver Coinage 1985 is a 48-page soft-bound booklet, and is the **only** publication that offers the reader accurate data on the diameter, weight, percent of pure silver, troy ounces of silver per coin, number of coins and troy ounces of silver used in each issue, as well as a brief description of the design on each coin. **It is available for only US$15 at The Silver Institute, 1026 Sixteenth Street, N.W., Suite 101, Washington, D.C. 20036.**

SILVER MAKES CHEMICALS PURER

The successful performance of pharmaceuticals, plastics, paints, and a host of other products used in home and industry depends on the purity of the organic chemicals used in their formulation.

Thus, the discovery of silver's ability to improve the process of purification of these chemicals is of extreme importance to the chemical industry and to the ultimate consumer.

The Silver Institute's quarterly publication, ***New Silver Technology***, recently summarized details about a new silver-based breakthrough just now entering the commercial production stream. **UOP Inc., Des Plaines, Illinois,** discovered that silver atoms can be exchanged for other atoms in a zeolite (a crystalline alumino-silicate with natural cavities capable of separating chemicals on the basis of physical size differences). These treated zeolites will then selectively adsorb specific organic chemicals onto their surfaces. UOP has developed this discovery into a system allowing continuous input of an impure mixture and continuous production of the separated pure chemicals.

Silver also plays a key role in another type of purification process. A different class of adsorbents was recently developed by the **Chiyoda Chemical Engineering and Construction Company, Tokyo, Japan.** This class uses a silica substrate treated with silver chloride. The treated surface adsorbs 0.7 millimole of ethylene per millimole of silver. Heating the silica to 194 °F fully releases the ethylene and results in a full regeneration of the adsorbent.

These are only the first steps in the development of this new breakthrough which brings an entirely new use of silver into focus. Future developments will also be reported in *New Silver Technology.*

ROYAL WEDDING, CANADIAN OLYMPICS, AND TIGER ON SILVER COINS

The Government of the Falkland Islands has commissioned the British Royal Mint to strike a special sterling silver proof Royal Wedding Commemorative Coin to celebrate the **wedding of His Royal Highness Prince Andrew and Miss Sarah Ferguson at Westminster Abbey** on July 23rd.

Pictured lower left, this large, legal tender coin shows the couple in profile within two oval frames. It has an authorized mintage limit of 20,000 and a denomination of £25.

This coin is priced at US$95 and orders may be sent to the British Royal Mint, c/o Barclays Bank of New York, PO Box 2570, New York, NY 10163.

In Canada, the Royal Canadian Mint has issued the second set of two $20 Canadian sterling silver legal tender coins in its popular series of 10 coins commemorating the **Calgary 1988 Olympic Winter Games. The new coins depict the Biathlon and Hockey events** and are available in proof finish only at **US$28 from the Royal Canadian Mint, P.O. Box 346, Station A, Ottawa, Ontario, Canada K1N 9L5 or call toll free: 1-800-267-1871.**

On the other side of the world, the China Mint Company has produced 10,000 proof 90% pure silver legal tender 10 Yuan coins commemorating the **Chinese Lunar Calendar's "Year of the Tiger".** The tiger is shown scrambling down a mountainside; the reverse shows the Hall of Supreme Harmony in Beijing. This popular animal coin is available for US$38 from PandaAmerica, Malaga Cove Plaza, P.O. Box 792, Palos Verdes Estates, CA 90505, USA.

A-MARK SEES EXPANDING MARKET FOR LIBERTADS

Carlos Ruiz, Treasurer of Banco de Mexico, announced that A-Mark Precious Metals, Inc. will continue to be the worldwide distributor of the Libertad as it has been since this unique one-ounce 999 pure silver, legal tender coin was first minted in 1982.

Since its introduction, more than five million Libertads have been sold internationally, and **Bruce L. Kaplan, Senior Vice President of A-Mark, predicts a significant mintage for the 1986 Libertad coin.** He noted that the Bank has already struck more than one million coins and that the new US silver bullion coin should significantly broaden the market for silver coins generally.

He continued, "Our research indicates that the potential market for silver bullion coins has just begun to be tapped by the Libertad. **We anticipate that the new US silver bullion coin will create a higher level of awareness amongst consumers as to the investment opportunities offered by one ounce silver bullion coins.** This heightened awareness will create new buyers not only for the U.S. silver bullion coin, but also for the Libertad."

For information about the Libertad, please contact **A-Mark Precious Metals, Inc., PO Box 5501, Beverly Hills, CA 90210 or call (213) 550-8861.**

SILVER INSTITUTE WELCOMES NEW MEMBERS

The Silver Institute warmly welcomes to membership **VFG Designs, Ltd.**, 25 West 45th Street, Suite 1409, New York, N.Y. 10036, to be officially represented in all Institute matters by its President, Victor Goldberg; **and Wilkens Bremer Silberwaren AG,** Postfach 448 320, An der Silberprage, 2800 Bremen 44, FRG, with Klaus Berthold, Executive Vice-President, as official representative in Institute Affairs.

SAMUEL MONTAGU'S 1985 BULLION REVIEW NOW AVAILABLE

Samuel Montagu & Co. Ltd.'s "Annual Bullion Review" for 1985 contains a 16 page report on the Course of the Silver Market, Silver Market Supplies, Offtake, Silver Stocks and The Outlook for this precious metal.

Copies of this excellent Annual Bullion Report 1985 may be obtained by writing to: Mr. Richard Zanghetti, Samuel Montagu & Co. Ltd., 535 Madison Avenue, 34th Floor, New York, NY 10022.

POPULAR STERLING SILVER LIBERTY CENTENNIAL KNIFE

The American Eagle Collector's Society has created a collector's pocket knife laden with American history. Its sterling silver handle features four engravings of historic American flags and its honed lock-back blade bears a deeply etched rendering of the American Eagle. And centered in the silver handle is a 14K gold medallion featuring a beautiful engraved portrait of the head of the Statue of Liberty. Each knife is individually numbered and is packaged in a hardwood display case. **This silver collector's item can be ordered from American Eagle Collector's Society, Academic Building, P.O. Box 642, West Haven CT 06516 for US$175 postpaid *until October 27, 1986* when the edition will be closed.** For credit card ordering, please call 1-800-526-7843 (Ext. 938).

DEGUSSA OFFERS REFINING BOOKLET

Degussa Corporation announces the availability of a 30-page, full color, illustrated brochure describing Degussa's precious metals recycling process.

The booklet, ***Refining***, contains information on materials suitable for refining, how metal value is determined, stages in the recovery process, and the various ways the recycled silver is returned to the customer.

It is an easy to understand, informative booklet for anyone involved in the trading, manufacture or use of gold. **For a copy, please contact Theodore Merkt, Degussa Corp., Rt. 46 at Hollister Rd., Teterboro, NJ 07608, (201) 288-6500.**

Degussa is a member of The Silver Institute and a worldwide leader in the development and manufacture of chemical, precious metal, and pharmaceutical specialties.

LATEST SILVER INSTITUTE REFINING STATISTICS

Production and Disposition of 999 Silver by All Known Refiners in the United States

	TROY OUNCES		MILLION TROY OUNCES		
	JUNE 1986	MAY 1986	Jan-Jun 1986	Jan-Jun 1985	Full Year 1985
THESE REFINERS' PRODUCTION, BY SOURCE			MONTHLY RATE		
From Primary (ores & concentrates)	2,352,007	2,975,541	3.0	4.3	4.1
From Coins	0	0	0.0	0.0	0.0
From Old Scrap (used photo film & other products)	2,376,361	2,479,900	2.6	2.5	2.5
From New Scrap (in-plant clippings, waste)*	2,401,071	2,091,491	2.2	2.1	2.4
TOTAL PRODUCTION	7,129,439	7,546,932	7.7	8.9	9.1
DISPOSITION BY THESE REFINERS					
Converted in Plant (consumed in fabricating, etc.)	4,231,712	4,093,746	4.3	3.2	3.8
Shipped Out as 999 Silver	3,201,436	3,502,321	3.4	5.9	5.6
TOTAL DISPOSITION	7,433,148	7,596,067	7.7	9.1	9.4
RESULTING CHANGE OF THESE REFINERS'			TOTAL FOR PERIOD		
STOCKS (Production Minus Disposition)	−303,709	−49,135	0.2	−1.1	−3.8
THESE REFINERS' STOCKS AT END OF PERIOD	318,592	622,301	0.3	2.9	0.1

Production and Disposition of **999 Silver** by All Known Refiners in Australia, Canada, Mexico, Peru, South Africa, Sweden, and West Germany; and some other Refiners in Europe and Asia.

	TROY OUNCES		MILLION TROY OUNCES		
	JUNE 1986	MAY 1986	Jan-Jun 1986	Jan-Jun 1985	Full Year 1985
THESE REFINERS' PRODUCTION, BY SOURCE			MONTHLY RATE		
From Primary (ores & concentrates)	13,678,662	13,372,021	13.5	13.5	13.9
From Coins	25,212	1,887,055	0.4	0.1	0.1
From Old Scrap (used photo film & other products)	3,398,748	3,112,844	3.9	4.0	4.0
From New Scrap (in-plant clippings, waste)*	828,844	645,994	0.9	0.9	0.9
TOTAL PRODUCTION	17,931,466	19,017,914	18.6	18.5	18.9
DISPOSITION BY THESE REFINERS					
Converted in Plant (consumed in fabricating, etc.)	1,749,089	1,198,175	1.6	1.5	1.4
Shipped Out as 999 Silver	17,651,412	18,083,905	17.2	17.2	17.3
TOTAL DISPOSITION	19,400,501	19,282,080	18.8	18.7	18.7
RESULTING CHANGE OF THESE REFINERS'			TOTAL FOR PERIOD		
STOCKS (Production Minus Disposition)	− 1,469,035	−264,166	−1.1	−1.1	2.4
THESE REFINERS' STOCKS AT END OF PERIOD	6,576,121	8,045,156	6.6	4.1	7.7

* PRODUCTION From New Scrap is 999 silver made from in-plant clippings, spillage, sweepings, etc., generated during manufacturing processes.

THE SILVER INSTITUTE
A WORLDWIDE ASSOCIATION OF MINERS, REFINERS, FABRICATORS AND MANUFACTURERS
INCORPORATED 1971

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THE SILVER INSTITUTE LETTER

WORLDWIDE INFORMATION ON SILVER

VOLUME XVI NUMBER 5 OCTOBER 1986

WIDESPREAD DEMAND FOR FIRST U.S. SILVER BULLION COIN

The U.S. Mint projects sales of 4 million "Silver Eagles" in the first full year of minting of this historic first U.S. silver bullion coin, said Eugene Essner, Deputy Director of the U.S. Mint, during his talk at the Silver Institute meeting on October 8 in Las Vegas, Nevada. Sales are expected to begin in late November 1986.

Eugene Essner, Deputy Director, US Mint (left) and Werner Knies, President of The Silver Institute, discuss new US silver coin programs.

One reason for the expected popularity of the "Silver Eagle" is found in the coin's beauty. According to Mr. Essner, this pure silver coin is a big coin, "designed to further communicate visually to consumers the beauty and value of silver. **Our 'Silver Eagle' has the elegant look of a truly 'precious' precious metal coin**."

Mr. Essner described this new 99.9% pure silver coin as having a face value of one dollar, weighing one troy ounce, and having a diameter of 40.60 millimeters. He added, "The obverse of the coin will be an image that has become a classic in America's silver coinage: the well-known 'Walking Liberty' design, while the reverse will portray a heraldic eagle."

Also contributing to the growing demand for this coin is its relatively low price. As Mr. Essner said, "We expect the 'Silver Eagle' to be an extremely popular coin. It is very affordable and will give those with modest budgets an attractive coin for investing, for wearing as an elegant piece of jewelry, or for giving as a gift."

Referring to the coin's impact on the world price of silver, he said that although the U.S. Mint has no projection in this regard, "**we are dedicated to creating a stable, orderly and growing market for our silver bullion coinage**. While silver coins are, admittedly, only one way to purchase silver, they could well be the most readily accessible and liquid medium for the millions of Americans who know little about the precious metals market."

Mr. Essner noted that the inauguration of the Mint's silver bullion coin program is further evidence of its return to a proud tradition of minting silver coins that began in 1794, was interrupted in the 1960's and 1970's, and resumed in 1982 with the production and sale of 7.1 million commemorative **silver half-dollars honoring the 250th birthday of George Washington**. Over 2.7 million ounces of silver were used in the minting of this coin.

This was followed by another success—the issuance and sale of over 4.4 million **Olympic silver dollars** using 3.4 million ounces of silver. He noted, "These Olympic dollars were the U.S. Government's first 90 percent silver dollars since 1935."

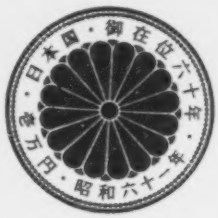
Then, last fall, the Mint began production of the **1986 Liberty Silver Dollar** which is also 90 percent silver and marks the first time that the Statue of Liberty has been depicted on U.S. coins. It has become one of the most popular U.S. commemorative coins ever issued, and **the Mint expects to generate over $49 million for the restoration of the Statue of Liberty and Ellis Island through surcharges on the projected sale of over 7,000,000 silver Liberty dollars by the end of the year—which is also the end of the program**.

Mr. Essner commented, "We have done our best, through an aggressive marketing program, to establish and maintain a public awareness of the inherent beauty and value of silver as a precious metal 'for the people'. And we believe we have achieved a long-term awareness and appreciation of silver that will help us fuel any future silver coin programs."

In closing, Mr. Essner said that the U.S. Mint will continue to work with the Silver Institute as the program progresses, and asked Institute members to "help us make the Silver American Eagle the most successful silver coin—and mass consumer silver product—in American history."

6.4 MILLION TROY OUNCES OF PURE SILVER USED TO MINT JAPANESE EMPEROR'S ANNIVERSARY COIN

In November, Japan will issue ten million pure silver coins to commemorate the 60th Anniversary of the reign of Emperor Hirohito. This 99.99% pure silver coin has a face value of 10,000 Yen, weighs 20 grams and has a diameter of 35mm. The new commemorative coin, **depicted at left, shows the 16-petal chrysanthemum, the emperor's seal, on its reverse. It has the sun rising over mountains and waterfowl on its obverse. The waterfowl, zuicho, flying above the sun, signify good luck and happiness.**



The Japanese Mint will deliver this issue to the Bank of Japan which will distribute them to 65,000 banks and post offices where they will be sold at face value. According to officials at the Ministry of Finance, demand for this coin exceeds supply to such an extent that a lottery system may have to be instituted to assure fair distribution.

MEXICO SELLING SILVER LIBERTAD BULLION COINS IN MEXICO

During the past two years, Mexico sold over five million of its handsome one troy ounce "Libertad" pure silver bulloin coins—depicting a winged Angel of Victory and measuring 36mm in diameter—to its export markets. Now, according to the Silver Institute Vice President for Mexico and Central America, Sr. Jorge Ordoñez of Frisco, S.A. de C.V., the "Libertad" silver bullion coin is being sold to the Mexican public too.

SILVER GLASS IS "IN" AT THE INN

A little silver can accomplish wonders. When Hilton Hotels Corporation decided to build what has been described as "the most modern, most sophisticated, most energy efficient hotel in the Detroit area," it turned to the Ford Glass Division 300 Renaissance Center, PO Box 43343, Detroit, Michigan 48243 for solar control glass. And Ford turned to silver.

Now, *as pictured below*, 15,000 square feet of reflective, clear, high performance silver ***Sunglas HP*** highlights the sleek, sophisticated facade of the recently inaugurated $20-million Novi Hilton.

Only 44 troy ounces of silver (with spot price value of about $218.00) were required to manufacture the silver *Sunglas* for the Novi Hilton.

Silver was chosen because it is not only beautiful and reduces annual heating and cooling costs, but it's use also makes it possible to reduce construction costs because buildings that use silver glass units require smaller capacity, less expensive, heating and cooling equipment.

A spokesperson of Ford Glass Division explained, "***Sunglas HP* is a very sophisticated product** designed to reflect and absorb large portions of the sun's radiant heat energy to help reduce solar heat gain in the summer. And in the winter, silver insulating glass reflects room heat back into the building even when the outside temperature is much colder."

MANY REASONS TO MINT CIRCULATING SILVER COINAGE

On September 17, 1986, during the XIV Mint Directors' Conference in Ottawa, Canada, the Executive Director of The Silver Institute, John H. Lutley, presented a talk on "Silver and Gold in Coinage." His presentation gave 71 mint directors historical, technical, and statistical data on many coin programs, suggestions on how to promote successful commemorative coin programs as well as a list of justifications for minting circulating silver coinage.

Among the factors needed to justify minting circulating silver coins are tradition, the availability of silver, its beauty, affordability, and public demand, said Mr. Lutley. He also noted that the **minting of legal tender silver coins can be a very profitable business** if the sponsoring governments invest enough money to provide the newly minted coins with the promotion, publicity, and public relations required to successfully market them. He commended marketers of the US Statue of Liberty coins for their efforts to educate school children in the pleasures of coin collecting and **urged mint directors to work for the expansion of the number of coin buyers**.

SPLENDID ARRAY OF SILVER CHRISTMAS GIFTS

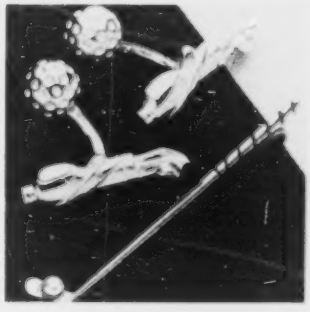
The display cabinets of Tiffany & Co. and the pages of its traditional Blue Book of gift selections always feature a wonderful array of silver products, but during the Christmas Seasons its seems that Tiffany & Co. has an even greater abundance of tempting silver gifts.

But for the people who have not had access to **Tiffany & Co.**'s beautiful store on Fifth Avenue & 57th Street, New York City, NY 10022 or its gift catalog, shopping for silver gift items at their local jewelers or department stores or in run-of-the-mill catalogs has not been an easy task because sterling silver consumer products were seldom on display in most retail outlets and were advertised infrequently in catalogs.

However, this year, fashionable quality sterling silver jewelry is already on display in many of the better jewelry and department stores of the United States.

But nothing compares with Tiffany & Co.'s imaginative display of tempting, artistic sterling silver objects ranging from the *pictured* whimsical Penguin ($200) to Tiffany's own Statue of Liberty screwball key ring for only $35, to a bold sterling silver Anchor belt buckle by Elsa Peretti for $230. A sterling miniature of the same Anchor as a pendant on a chain sells for $45. The same designer produced a "Saddle Bag" evening purse in sterling silver with calf leather lining, priced at $790.

Under the caption, "Nothing matches sterling for its cool, white brilliance. It sets off the warmth of skin tones and makes a vanity shimmer," Tiffany's catalog features, among other items, an oval compact, cuff bracelet, letter opener, graduated bead necklace, ear clips, nail file, perfume flask, and a beautiful pin with a rendering of a sleek silver dolphin leaping through an 18-karat gold ring.



***Pictured*, from Tiffany's men's collection** are the $130 sterling silver golf bag and ball cuff links and the golf club tie bar in sterling silver with cultured pearl "ball" for only $45.

To place an order, request additional information or ask for a copy of the latest catalog of Tiffany & Co., call 800-526-0649.

SILVER INSTITUTE WELCOMES NEW MEMBERS

The Silver Institute warmly welcomes to membership Koch & Bergfeld, Postfach 104026, 2800 Bremen, Federal Republic of Germany, with Gottfried Koch as Official Representative; and Robbe & Berking GmbH & Co., P.O. Box 2552, D2390 Flensburg, Federal Republic of Germany, with Robert Berking, President, as Official Representative in Institute Affairs.

SUPERIOR NEW SILVER BURN THERAPY DEVELOPED

A versatile new silver complex, silver diphenyl hydantoin, promises to be useful for a variety of commercial applications. Its effectiveness as a topical agent in burn therapy is apparently superior to that of silver sulfadiazine, which is itself widely and successfully used. It is also effective against all malaria-carrying parasites. As a biocide to treat humans, animals and plants, it can be beneficially incorporated in bandages, mosquito nettings, sprays, and garden stakes.

This is only one of the 240 most important new applications of silver technology that are reported to the members of The Silver Institute and to the subscribers to the quarterly publication **New Silver Technology (NST)**.

If you are interested in being on the leading edge of the latest in silver technology, you should subscribe to NST today!

ORDER FORM FOR "NEW SILVER TECHNOLOGY"

Annual Subscription to New Silver Technology for 1986 (US $45)

Enclosed is my check for US $45.00 made payable to **The Silver Institute,** Suite 101, 1026 Sixteenth St. NW, Washington DC 20036.

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DRAMATIC FALL IN UNITED STATES SILVER PRODUCTION

As shown below, in the first eight months of 1986 the production of refined silver, by U.S. participants in The Silver Institute refining series, averaged 2.8 million ounces per month. This is 21% below the 1977 average of 3.4 million ounces which was the previous low in the series that dates back to 1974. Non-U.S. primary production held steady at 13.5 million ounces per month. World-wide secondary refining was 8.9 million ounces per month; the lowest level ever.

Total silver production at 25.2 million ounces per month was 2.2 million (9.2%) less than the average for the last two years and was the lowest since 1977.

LATEST SILVER INSTITUTE REFINING STATISTICS

Production and Disposition of 999 Silver by All Known Refiners in the United States

	TROY OUNCES		MILLION TROY OUNCES		
	AUGUST 1986	JULY 1986	Jan-Aug 1986	Jan-Aug 1985	Full Year 1985
THESE REFINERS' PRODUCTION, BY SOURCE			MONTHLY RATE		
From Primary (ores & concentrates)	2,604,635	1,989,156	2.8	4.5	4.1
From Coins	0	0	0.0	0.0	0.0
From Old Scrap (used photo film & other products)	2,464,134	962,312	2.3	2.5	2.5
From New Scrap (in-plant clippings, waste)*	1,335,685	1,036,523	2.0	2.0	2.4
TOTAL PRODUCTION	6,404,454	3,987,991	7.1	9.0	9.1
DISPOSITION BY THESE REFINERS					
Converted in Plant (consumed in fabricating, etc.)	3,170,985	1,512,665	3.8	3.1	3.8
Shipped Out as 999 Silver	3,153,758	1,965,065	3.2	6.0	5.6
TOTAL DISPOSITION	6,324,743	3,477,730	7.0	9.2	9.4
RESULTING CHANGE OF THESE REFINERS'			TOTAL FOR PERIOD		
STOCKS (Production Minus Disposition)	79,711	510,261	0.8	−1.3	−3.8
THESE REFINERS' STOCKS AT END OF PERIOD	908,564	828,853	0.9	2.6	0.1

Production and Disposition of **999 Silver** by All Known Refiners in Australia, Canada, Mexico, Peru, South Africa, Sweden, and West Germany; and some other Refiners in Europe and Asia.

	TROY OUNCES		MILLION TROY OUNCES		
	AUGUST 1986	JULY 1986	Jan-Aug 1986	Jan-Aug 1985	Full Year 1985
THESE REFINERS' PRODUCTION, BY SOURCE			MONTHLY RATE		
From Primary (ores & concentrates)	14,043,223	13,171,465	13.5	13.5	13.9
From Coins	3,462	0	0.3	0.1	0.1
From Old Scrap (used photo film & other products)	1,742,584	2,989,986	3.5	3.9	4.0
From New Scrap (in-plant clippings, waste)*	335,352	748,154	0.8	0.9	0.9
TOTAL PRODUCTION	16,124,621	16,909,605	18.1	18.4	18.9
DISPOSITION BY THESE REFINERS					
Converted in Plant (consumed in fabricating, etc.)	61,665	1,562,240	1.4	1.3	1.4
Shipped Out as 999 Silver	17,205,929	14,482,848	16.8	17.2	17.3
TOTAL DISPOSITION	17,267,594	16,045,088	18.3	18.5	18.7
RESULTING CHANGE OF THESE REFINERS'			TOTAL FOR PERIOD		
STOCKS (Production Minus Disposition)	− 1,142,973	864,517	−1.4	−0.6	2.4
THESE REFINERS' STOCKS AT END OF PERIOD	6,297,665	7,440,638	6.3	4.7	7.7

* PRODUCTION From New Scrap is 999 silver made from in-plant clippings, spillage, sweepings, etc., generated during manufacturing processes.

THE SILVER INSTITUTE

A WORLDWIDE ASSOCIATION OF MINERS, REFINERS, FABRICATORS AND MANUFACTURERS

INCORPORATED 1971

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